

GCSE Design Technology is a demanding but very rewarding course to study. Very few subjects offer such a good opportunity to develop such a breadth of vital skills. At Caroline Chisholm School the course is delivered in Year 10 and Year 11 and is broken down as follows:

Year 10:

You will complete 3 projects (or mini NEAs) which will cover a variety of material areas and design disciplines.

Project 1 – Storage solution

This project focuses on accuracy and quality. You will make a small storage solution using plywood, MDF and acrylic. You will use a variety of processes and techniques including joining, line bending, laser cutting and finishing. You will learn how to operate safely and confidently in the workshop as well as logging your progress and explaining how you have ensured good quality as you have progressed.

Project 2 – Mini flat-packed furniture

This project is the first opportunity to create a product of your own design! The project focuses heavily on the iterative design process and you will be expected to choose a design movement as a theme around which to base your ideas. You will learn some of the research techniques you will need in Year 11 and will complete a design portfolio including:

1. Investigation of design possibilities
2. Appropriate primary and secondary research
3. Design specification
4. Design and design development including modelling techniques
5. Practical task and outcome
6. Evaluation of prototype

Project 3 – Specialist processes and techniques

The final project in Year 10 is designed to give you confidence in some of the equipment and techniques you will not yet have covered but will be very useful in Year 11 including:

1. Vacuum forming
2. Metal working (welding, brazing and forming)
3. Hand-held power tools such as the router and biscuit jointer
4. Finishing and joining techniques

This project is a series of smaller practical tasks which will also support theoretical elements of the course covered in the examination at the end of Year 11.

In addition to the 3 projects outlined above, you will study theory throughout the Year. These comprises of two main areas:

- Core principles of Design Technology

This covers a huge variety of design principles from energy generation and storage to a the effects of new and emerging technologies.

- Specialist principles of Design Technology

In this section you will focus on studying a specific material area in greater depth including where the materials are sourced, how they are processed and the different methods by which they are turned into functional products.

The exam board will release 'contextual challenges' on the 1st June in Year 10. From these challenges, you will choose a task which will form the starting point of your individual GCSE project.

There are two key components of the GCSE which are assessed:

Component 1 (*Paper code: 1DT0/1A, 1B, 1C, 1D, 1E, 1F)

***Written examination: 1 hour and 45 minutes 50% of the qualification
100 marks***

Content overview

1 – Core content
and any **one** from the following material categories:

- 2 – Metals
- 3 – Papers and boards
- 4 – Polymers
- 5 – Systems
- 6 – Textiles
- 7 – Timbers

Assessment overview

The paper consists of two sections. Section A is assessed on the core content and Section B is assessed on the material category students have chosen.

1DT0/1A – Metals, 1DT0/1B – Papers and boards, 1DT0/1C – Polymers, 1DT0/1D – Systems, 1DT0/1E – Textiles, 1DT0/1F – Timbers

Calculators may be used in the examination. Information on the use of calculators during the examinations for this qualification can be found in *Appendix 2: Calculators*.

Section A: Core

This section is 40 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 10 marks of calculation questions in Section A.

Section B: Material categories

This section is 60 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 5 marks of calculation questions in Section B.

Component 2 (Paper code: 1DT0/02)

Non-examined assessment 50% of the qualification 100 marks

Content overview

There are four parts to the assessment:

1 – Investigate

This includes investigation of needs and research, and a product specification

2 – Design

This includes producing different design ideas, review of initial ideas, development of design ideas into a chosen design, communication of design ideas and review of the chosen design

3 – Make

This includes manufacture, and quality and accuracy

4 – Evaluate

This includes testing and evaluation.

Assessment overview

- Students will undertake a project based on a contextual challenge released by us a year before certification.
- This will be released on 1st June and will be available on our website.
- The project will test students' skills in investigating, designing, making and evaluating a prototype of a product.
- Task will be internally assessed and externally moderated.
- The marks are awarded for each part as follows.

- o **1 – Investigate** (16 marks)
- o **2 – Design** (42 marks)
- o **3 – Make** (36 marks)
- o **4 – Evaluate** (6 marks)